

**IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION**

LIONRA TECHNOLOGIES LTD.,

Plaintiff,

v.

FORTINET, INC.,

Defendant.

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CIVIL ACTION NO. 2:22-cv-0322-JRG-RSP
(LEAD CASE)

REPORT AND RECOMMENDATION

Before the Court are Defendant Fortinet’s Motion for Summary Judgment of Invalidity Pursuant to 35 U.S.C. §101 and Plaintiff Lionra’s Motion for Summary Judgment of No Invalidity Under 35 U.S.C. § 101. After consideration, the Court recommends finding none of the patents are invalid under §101 as provided below.

I. APPLICABLE LAW

Summary judgment should be granted “if the movant shows that there is no genuine dispute as to any material fact and the movant is entitled to judgment as a matter of law.” Fed. R. Civ. P. 56(a). Any evidence must be viewed in the light most favorable to the nonmovant. *See Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 255 (1986) (citing *Adickes v. S.H. Kress & Co.*, 398 U.S. 144, 158–59 (1970)). Summary judgment is proper when there is no genuine dispute of material fact. *Celotex v. Catrett*, 477 U.S. 317, 322 (1986). “By its very terms, this standard provides that the mere existence of some alleged factual dispute between the parties will not defeat an otherwise properly supported motion for summary judgment; the requirement is that there be no genuine [dispute] of material fact.” *Anderson*, 477 U.S. at 247–48. The substantive law identifies the material facts, and disputes over facts that are irrelevant or unnecessary will not defeat a motion for summary judgment. *Id.* at 248. A dispute about a material fact is

“genuine” when the evidence is “such that a reasonable jury could return a verdict for the nonmoving party.” *Id.*

The moving party must identify the basis for granting summary judgment and evidence demonstrating the absence of a genuine dispute of material fact. *Celotex*, 477 U.S. at 323. “If the moving party does not have the ultimate burden of persuasion at trial, the party ‘must either produce evidence negating an essential element of the nonmoving party’s claim or defense or show that the nonmoving party does not have enough evidence of an essential element to carry its ultimate burden of persuasion at trial.’” *Intellectual Ventures I LLC v. T Mobile USA, Inc.*, No. 2:17-CV-00577-JRG, 2018 WL 5809267, at *1 (E.D. Tex. Nov. 6, 2018) (quoting *Nissan Fire & Marine Ins. Co., Ltd. v. Fritz Cos., Inc.*, 210 F.3d 1099, 1102 (9th Cir. 2000)).

A. 35 U.S.C. §101

Anyone who “invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof” may obtain a patent. 35 U.S.C. § 101. Since patent protection does not extend to claims that monopolize the “building blocks of human ingenuity,” claims directed to laws of nature, natural phenomena, and abstract ideas are not patent eligible. *Alice Corp. Pty. v. CLS Bank Int’l*, 573 U.S. 208, 216 (2014). The Supreme Court therefore instructs courts to distinguish between claims that set forth patent ineligible subject matter and those that “integrate the building blocks into something more.” *Id.* at 217.

Courts use a two-step framework for analyzing whether claims at issue claim patent-eligible subject matter. *Id.* at 217–18; *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1334 (Fed. Cir. 2016). First, courts “determine whether the claims at issue are directed to a patent-ineligible concept.” *Id.* (quoting *Alice*, 573 U.S. at 217 (quoting *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 77–78 (2012))). In doing so, the court must be wary not to over

generalize the invention, as “all inventions . . . embody, use, reflect, rest upon, or apply laws of nature, natural phenomena, or abstract ideas.” *Alice*, 573 U.S. at 217 (quoting *Mayo*, 566 U.S. at 71).

“If this threshold determination is met, [courts] move to the second step of the inquiry and ‘consider the elements of each claim, both individually and “as an ordered combination” to determine whether the additional elements “transform the nature of the claim” into a patent-eligible application.’” *Enfish*, 822 F.3d at 1334 (quoting *Alice*, 573 U.S. at 217 (quoting *Mayo*, 566 U.S. at 79)). A claimed invention is patent-eligible at *Alice* Step Two when the claim limitations “involve more than performance of ‘well-understood, routine, [and] conventional activities previously known to the industry.’” *Content Extraction & Transmission LLC v. Wells Fargo Bank, Nat. Ass’n*, 776 F.3d 1343, 1347–48 (Fed. Cir. 2014) (quoting *Alice*, 573 U.S. at 225) (quoting *Mayo*, 566 U.S. at 73 (internal quotation marks and brackets omitted)).

Patent eligibility is a question of law, based on underlying facts. *SAP Am., Inc. v. InvestPic, LLC*, 898 F.3d 1161, 1166 (Fed. Cir. 2018), *cert. denied*, 139 S. Ct. 2747 (2019), *reh’g denied*, No. 18-1199, 2019 WL 3976449 (Aug. 23, 2019). Whether the claim elements or combination are well-understood, routine, and conventional is a question of fact. *Aatrix Software, Inc. v. Green Shades Software, Inc.*, 882 F.3d 1121, 1128 (Fed. Cir. 2018).

II. ANALYSIS

In its Motion Fortinet argues claims 1 and 12 of the ’612 Patent and claim 1 of the ’436 patent are invalid under §101. Lionra further contends claims 1, 2, 13, and 22 of the ’436 Patent, 1, 2, 12, and 13 of the ’612 Patent, and 27 and 31 of the ’323 Patent¹ are valid under §101.

A. U.S. 8,566,612

U.S. Patent No. 8,566,612 claim 1 provides:

¹ Defendants do not oppose validity under §101 for the ’323 Patent, so the Court recommends Lionra’s motion be **GRANTED** as to the ’323 Patent.

A security processor to process incoming packets and outgoing packets, the security processor comprising:

- [1A] a switching system to send the outgoing packets and receive the incoming packets;
- [1B] a packet engine, coupled to the switching system, to handle classification processing for the incoming packets received by the packet engine from the switching system and the outgoing packets sent by the packet engine to the switching system, wherein the packet engine is one of a plurality of packet engines and substantially all of the incoming and outgoing packets to the security processor transit one of the plurality of packet engines;
- [1C] a cryptographic core, coupled to the packet engine and receiving the incoming packets from the switching system via the packet engine and communicating the outgoing packets to the switching system via the packet engine, to provide encryption and decryption processing for packets received from and sent to the packet engine, wherein the packet engine is interposed between the switching system and the cryptographic core;
- [1D] a signature database; and
- [1E] an intrusion detection system coupled between the cryptographic core and the packet engine and responsive to at least one packet matching a signature stored in the signature database.

For step 1, Fortinet contends claim 1 is directed to a series of abstract ideas including “(1) receiving and sending out information (like a clerk receiving and sending messages); (2) decrypting received information or encrypting outgoing information (like decoding a confidential message after receiving it, or encoding a confidential message before sending it out); (3) classifying information (like sorting messages by subject matter); and (4) determining whether the information contains certain things on a list (like checking whether the message contains certain words or phrases on a list of key words/phrases).” (Dkt. No. 259 at 6-7.)

Fortinet addresses each limitation. It contends element 1A is directed to sending and receiving information and provides no technical details as to how that is to be accomplished. (*Id.* at 7.) Fortinet argues 1B is directed to classification but the limitation does not provide any details about the classification process and thus without any technological improvement, it only claims an abstract idea. (*Id.* at 7-8.) In particular, Fortinet contends the Court’s construction of “packet engine” to be “hardware, or a combination of hardware and software, that is configured

to perform packet operation” reinforces the abstract nature. (*Id.* at 8.) As to 1C Fortinet points to a similar construction of “cryptographic core” and contends the claim provides no improvement to the encryption/decryption process. (*Id.* at 8-9.) Fortinet contends 1D adds nothing and does not even interact with the rest of the claim. (*Id.* at 9.) Last, Fortinet argues 1E likewise provides no technical detail to how intrusion detection is performed, and the referenced matching is simply abstract. (*Id.* at 9-10.) Fortinet contends the same is from the dependent claim 12, it adds nothing and only recites simple matching. (*Id.* at 22.)

For Step 2, Fortinet contends there is no inventive concept to be found. (*Id.* at 10-11.) First, Fortinet largely reiterates its above points that there is no inventive concept among the claim elements as they relate to generic hardware without significantly more. (*Id.* at 11-14.) Next, Fortinet points to the specification arguing it confirms the components are generic without any technical improvements. (*See id.* at 14-16.) Fortinet also points to testimony from an inventor that the invention was “the specific configuration of these well-known concepts into distinct hardware.” (*Id.* at 16-19.) Fortinet contends both further inventor testimony and Lionra’s infringement contentions demonstrate there is no claimed arrangement since the “packet engine,” “cryptographic core,” and “intrusion detection system” can be the same hardware. (*Id.* at 19.) Lastly, Fortinet points to Lionra’s validity expert Dr. Cole as being unable to articulate how the claims provide a technical improvement. (*Id.* at 20-22.)

In response, Lionra contends Fortinet incorrectly focused on the individual elements rather than the claims as a whole. (Dkt. No. 292 at 4-5.) For step one, Lionra contends the claims are directed to “technical improvements to the secure processing of data packets.” (*Id.* at 5.) Lionra contends the claimed advance is “the particular arrangement and architecture of functional components within the security processor.” (*Id.*) Lionra argues the claimed

arrangement forms a “security processor” far from an abstract idea. (*Id.* at 7.) Lionra points to the specification showing that the claimed invention improves on the prior art by combining firewall, networking, and security functionalities efficiently into one system where they were previously in multiple. (*Id.* at 7-8.) Lionra also points to the prosecution history of both patents where it alleges this arrangement was used to overcome prior art. (*Id.* at 9-10.)

Lionra also contests Fortinet’s element by element analysis. (*Id.* at 11-14.) Lionra contends that 1A relates to “internet protocol (IP) data packets or other datagrams” bringing the limitation outside human capability. (*Id.* at 11.) Lionra argues 1B relates to the means of information conveyance not just the content as in *C R Bard Inc. v. AngioDynamics, Inc.*, 979 F.3d 1372, 1384 (Fed. Cir. 2020). (*Id.*) For 1C, Lionra contends encryption and decryption are more complex than anything that might be executable by humans. (*Id.* at 12.) Lionra likewise contends that 1D is not a concept executable by humans. (*Id.*) Lastly, Lionra argues the “intrusion detection system” is a computing concept specific to network security, not simple matching. (*Id.*)

As to step 2, Lionra contends the claimed security processor was not “well-understood, routine and conventional.” (*Id.* at 15.) Lionra points to the specification, arguing the claimed invention improved communication speed and reduced both the number of different systems and bottlenecks in prior systems. (*Id.* at 15-16.) Lionra further points to the prosecution history where the “the specific combination of functional components in the claimed security processor was highlighted.” (*Id.* at 16.) Lionra likewise points to an *ex parte* reexamination determination overcoming prior art. (*Id.* at 17.) Lastly, Lionra points to testimony by an inventor and Dr. Cole that the claims provide an inventive combination. (*Id.* at 17-19.)

The Court finds the claims are not directed to an abstract idea. The Court is convinced by

Lionra and the specification's discussion that the inventive concept of the claimed security processor does involve arranging known components in a novel manner. However, this does not run afoul of §101. Novel combinations and arrangements of known components are patentable when not obvious. Indeed, this seems to be the nature of Fortinet's underlying complaint, not its being directed to an abstract idea.

Fortinet's contention that there is no arrangement because some of the claimed components can embody the same physical hardware, does not demonstrate there is no inventive arrangement. Even logical, rather than physical, arrangements may support novelty. Here, Fortinet has not demonstrated that this logical arrangement amounts to nothing more than an abstract idea or that it cannot support an inventive concept.

As the parties' arguments as to the remaining contested claims are largely the same as discussed above, the Court finds they are likewise not ineligible under §101.

B. U.S. 7,685,436

Claim 1 of the '436 Patent recites:

A security processor to process incoming packets and outgoing packets, the security processor comprising:

- a switching system to send the outgoing packets and receive the incoming packets;
- a packet engine, coupled to the switching system, to handle classification processing for the incoming packets received by the packet engine from the switching system and the outgoing packets sent by the packet engine to the switching system, wherein the packet engine is one of a plurality of packet engines and substantially all of the incoming packets and outgoing packets to the security processor transit one of the plurality of packet engines, and wherein the incoming packets and outgoing packets are provided with a tag upon ingress to one of the plurality of packet engines and the tag determines an egress path within the security processor upon exit from a corresponding cryptographic core;
- a cryptographic core, coupled to the packet engine and receiving the incoming packets from the switching system via the packet engine and communicating the outgoing packets to the switching system via the packet engine, to provide encryption and decryption processing for packets received from and sent to the packet engine, wherein the packet engine is interposed between the switching system and the cryptographic core;
- a signature database; and

an intrusion detection system coupled between the cryptographic core and the packet engine and responsive to at least one packet matching a signature stored in the signature database.

There is only one clause that is different between claim 1 of the '436 patent and claim 1 of the '612 patent discussed above: “and wherein the incoming packets and outgoing packets are provided with a tag upon ingress to one of the plurality of packet engines and the tag determines an egress path within the security processor upon exit from a corresponding cryptographic core.”

Fortinet argues this additional limitation is analogous to human labeling of messages and adds nothing. (Dkt. No. 259 at 23.) As such, Fortinet argues this claim is directed to an abstract concept and has no inventive concept. (*Id.* at 23-24.)

For the same reason as above, the Court finds that this claim is not directed to an abstract idea because it is directed to a concrete arrangement of a security processor.

III. CONCLUSION

The Court recommends that the Fortinet’s Motion be **DENIED** and Lionra’s Motion be **GRANTED** as provided above.

A party’s failure to file written objections to the findings, conclusions and recommendations contained in this report within 14 days bars that party from *de novo* review by the District Judge of those findings, conclusions, and recommendations and, except on grounds of plain error, from appellate review of unobjected-to factual findings and legal conclusions accepted and adopted by the district court. FED. R. CIV. P. 72(b)(2); *see also Douglass v. United Servs. Auto. Ass’n*, 79 F.3d 1415, 1428–29 (5th Cir. 1996) (*en banc*). Any objection to this

Report and Recommendation must be filed in ECF under the event “Objection to Report and Recommendation [cv, respoth]” or it may not be considered by the District Judge.

SIGNED this 23rd day of April, 2024.



ROY S. PAYNE
UNITED STATES MAGISTRATE JUDGE